

WHAT IS CLAIMED IS:

1. A method of controlling the power level of multicast data transmissions in a wireless communications network, comprising:
 - providing power level information in a transmitted channel received by a user equipment;
 - measuring the power level of a signal received by said user equipment;
 - comparing the power level measured by the user equipment to the power level indicated by said power level information provided in said transmitted channel;
 - and
 - including power level measurement information in a message sent by said user equipment depending on the results obtained when the power level measured by said user equipment is compared to the power level indicated by said power level information provided in said transmitted channel.
2. A method according to claim 1, wherein the method is carried out when the user equipment enters a new cell.
3. A method according to claim 1, wherein said comparing step is performed in said user equipment and said power level measurement information is included in said message sent by said user equipment if the power level measured by said user equipment is less than the power level indicated by said power level information provided in said transmitted channel.

4. A method according to claim 3, wherein the message sent by said user equipment if the power level measured by said user equipment is less than the power level indicated by said power level information provided in said transmitted channel is a Cell Update message.

5. A method according to claim 3, wherein the message sent by said user equipment if the power level measured by said user equipment is less than the power level indicated by said power level information provided in said transmitted channel is a URA Update message.

6. A method according to claim 3, wherein the message sent by said user equipment if the power level measured by said user equipment is less than the power level indicated by said power level information provided in said transmitted channel is an Uplink Direct Transfer message.

7. A method according to claim 3, wherein the message sent by said user equipment if the power level measured by said user equipment is less than the power level indicated by said power level information provided in said transmitted channel is an Multicast Power Indication message.

8. A method according to claim 3, wherein said user equipment decides what type of message to send if the power level measured by said user equipment is less than the power level indicated by said power level information provided in said transmitted channel.

9. A method according to claim 1, wherein the method is performed periodically while said user equipment is in the same cell.

10. A method according to claim 1, further comprising storing in a multicast database said power level measurement information included in said message sent by said user equipment.

11. A method according to claim 1, wherein said message sent by said user equipment does not cause the establishment of an RRC connection.

12. A method according to claim 1, wherein said wireless communication network changes the power level of multicast data transmissions based on the power level measurement information included in a message sent by said user equipment.

13. A method according to claim 12, wherein the power level of said multicast data transmissions is less than the maximum power level required for all user equipments in the wireless communication network.

14. A method according to claim 12, further comprising tracking the location of user equipments in the wireless communication network.

15. A user equipment for receiving multicast data transmissions in a wireless communications network, said user equipment adapted to carry out a power level control method comprising:

receiving power level information in a transmitted channel;

measuring the power level of a received signal;

comparing the measured power level to the power level indicated by said power level information provided in said transmitted channel; and

including power level measurement information in a message depending on the results obtained when the power level measured by said user equipment is compared to the power level indicated by said power level information provided in said transmitted channel.

16. A user equipment according to claim 15, wherein the method is carried out when the user equipment enters a new cell.

17. A user equipment according to claim 15, wherein the message sent by said user equipment is a Cell Update message.

18. A user equipment according to claim 15, wherein the message sent by said user equipment is a URA Update message.

19. A user equipment according to claim 15, wherein the message sent by said user equipment is an Uplink Direct Transfer message.

20. A user equipment according to claim 15, wherein the message sent by said user equipment is an Multicast Power Indication message.

21. A user equipment according to claim 15, wherein said user equipment decides what type of message to send if the measured power level is less than the power level indicated by said power level information provided in said transmitted channel.

22. A user equipment according to claim 15, wherein the method is performed periodically while said user equipment is in the same cell.

23. A network element in a wireless communication network, said network element performing a method comprising:

providing power level information in a downlink channel transmitted to user equipment in said wireless communication network;

receiving a message from user equipment, said message including power level measurement information indicating the results of a comparison of the power level measured by said user equipment to the power level indicated by said power level information provided in said transmitted channel; and

controlling the power level of multicast data transmissions based on said message.

24. A network element according to claim 23, wherein said wireless communication network changes the power level of multicast data transmissions

based on the power level measurement information included in a plurality of messages sent by a plurality of user equipment.

25. A network element according to claim 23, wherein the power level of said multicast data transmissions is less than the maximum power level required for all user equipments in the wireless communication network.

26. A network element according to claim 23, further comprising tracking the location of user equipments in the wireless communication network.

27. A network element according to claim 23, wherein said network element stores the power level measurement information included in a plurality of messages sent by a plurality of user equipment in a multicast database.

28. A network element according to claim 24, wherein said network element is adapted to receive a messages including power level measurement information indicating that the power level measured by said user equipment is less than the power level indicated by said power level information provided in said transmitted channel and to provide that said wireless communications network increases the power level of multicast data transmissions in response to said messages including said power level measurement information.

29. A network element according to claim 24, wherein said network element is adapted to receive messages including power level measurement information

indicating that the power level measured by said user equipment is less than the power level indicated by said power level information provided in said transmitted channel and to provide that said wireless communications network decreases the power level of multicast data transmissions in the absence of said messages.

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